

Abstract

5       The present invention relates to stable pharmaceutical protein formulations that are stabilized using peptide stabilizers selected from the group consisting of Gly-Gly, Gly-Gly-Gly, Gly-Tyr, Gly-Phe, Gly-His, Gly-Asp, Gly-Ala, Ala-Gly, Ala-Ala, derivatives thereof and mixtures thereof. Furthermore, the present invention relates to stable pharmaceutical formulations comprising erythropoietin and peptide stabilizers selected from dipeptides, tripeptides, tetrapeptides, pentapeptides, and mixtures thereof. In addition to peptide stabilizers, the formulations may contain surfactants.